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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,902	05/14/2001	Stefan Wieland	33766W030	6174

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EXAMINER

LANGEL, WAYNE A

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

853902

Applicant(s)

Nieland et al

Examiner

Langel

Group Art Unit

1754

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-16 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-16 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some* ☐ None of the:

- ☒ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 5
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) The invention was described in (1) an application for patent, published under Section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Grieve et al. No distinction is seen between the process disclosed by Grieve et al., and that recited in claims 1-6. Grieve et al. disclose an adiabatic reforming process, and

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discloses in paragraph 0049 that possible catalyst materials are palladium or rhodium which may be coated on a catalyst support. Grieve et al. teach in paragraph 0046 that the support material may be aluminum oxide or silica. It is noted that the effective filing date of Grieve et al. is February 15, 2001, which is after applicant's foreign priority date of May 20, 2000. However there is no certified English translation of applicant's priority document of record, so it cannot be determined whether applicant is entitled to such priority date, and Grieve et al. is properly available as prior art.

Claims 7-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grieve et al. as applied to claims 1-6 above, and further in view of Hwang et al. It would be further obvious from Hwang et al. to employ cerium oxide in the catalyst of Grieve et al., and/or to employ the catalyst on a monolith substrate, since Hwang et al. disclose an adiabatic steam reforming process, and teaches at column 4 that the catalyst may be provided on a monolith substrate, and further disclose in the paragraph bridging columns 5 and 6 that the catalyst may contain cerium oxide, in addition to the platinum group metal. Hwang et al. is properly available as prior art, since there is no certified English translation of applicant's priority document of record, so it cannot be determined whether applicant is entitled to the priority date of May 20, 2000.

Claims 1-6 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chintawar et al. in view of Klein et al. Chintawar et al. disclose an adiabatic reforming process in which the catalyst may constitute platinum or rhodium on a support material such as titanium oxide. See column 4, line 51 - column 5, line 60, particularly column 5, lines 10-20.) The difference between the process disclosed by Chintawar et al., and that recited in applicant's claims, is that Chintawar et al. do not specifically disclose that the catalyst material should be applied as a coating on the carrier structure. Chintawar et al. teach at column 10, lines 4-10 that the monolithic base may be wash-coated with zirconium oxide upon which the metal is then dispersed. The metal may be dispersed by any known method such as an incipient wetness method. Klein et al. disclose a process for preparing a catalyst which has a catalytically active coating made by producing a coating dispersion and coating the carrier structure with such dispersion. (See, for example, column 1, lines 4-10 and column 4, lines 37-52.) It would be prima facie obvious from Klein et al. to employ a catalyst in the process of Chintawar et al., wherein the catalyst material has been coated on the catalyst support, since Klein et al. establish the conventionality of employing catalysts which are present as a coating on the support structure, and Chintawar et al. teach at column 10, lines 4-10 that the catalytic metal may be dispersed

by any known method. "Any known method" would include the coating method of Klein et al.

Claims 7-9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chintawar et al. in view of Klein et al. as applied to claims 1-6 and 10 above, and further in view of either Choudhary et al. or Fujitani et al. It would be further obvious from either Choudhary et al. or Fujitani et al. to include cerium oxide as a component in the catalyst of Chintawar et al., since Choudhary et al. disclose at column 3, lines 44-54 that cerium is a useful component in catalysts for adiabatic reforming of hydrocarbons, and Fujitani et al. teach in the Abstract that a steam reforming catalyst comprising cerium oxide and rhodium can maintain high catalytic activity and durability for steam reforming without any carbon deposition on its surface. One of ordinary skill in the art would recognize from either Choudhary et al. or Fujitani et al. that cerium oxide would be a suitable additional component for the catalyst of Chintawar et al.

Tamhanker et al. is made of record for disclosing a process for the catalytic partial oxidation of hydrocarbons, wherein the metal catalysts are a monolith support structure composed of ceria and coated with a transition metal or combination thereof.

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Yagi et al. is made of record for disclosing a steam reforming process in which the catalyst is prepared by an incipient-wetness method.

Hershkowitz et al. '138, Hershkowitz et al. '912 and Roy et al. are made of record for disclosing the autothermal steam reformation of hydrocarbons in the presence of platinum group metal catalysts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (703) 308-0248. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (703) 308-3837. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2351.

WAL:cdc

April 17, 2003

Wayne A. Langel
WAYNE A. LANGE
PRIMARY EXAMINER